Verizon Contingency Planning for COOP

"Ensuring Mission Critical Operations in an Unpredictable World…"

The Plans Explained

Continuity of Operations Plan (COOP) (IAW FPC 65)

- **Viable, executable plans for leadership, succession, and key personnel to ensure that a department/agency's essential functions continue to function as needed**

Contingency Plan (IAW NIST special PUB 800-34)

- **Planning, development, Implementation, and Testing of the enterprise to support and sustain mission-critical operations with reliable network, communications, and applications solutions during crisis situations**

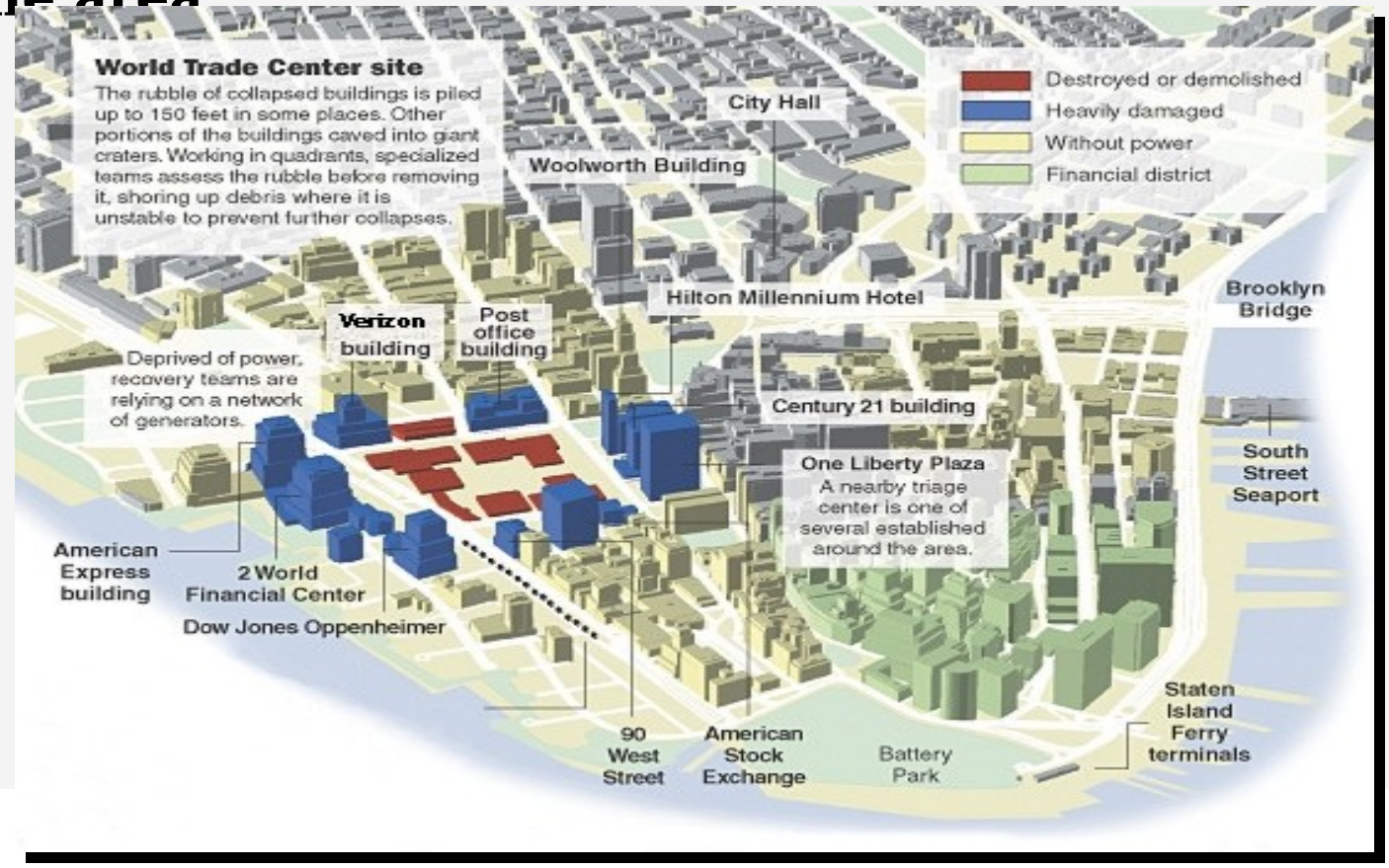
The Impact: How Downtime Affects the Mission

Disruptions of the Mission can Impact a Wide Range of Constituents and Customers

- **External (Customers/General Public/Media)**
  - **Services**
  - **Salaries and Benefits**
  - **Informational Communications**
  - **Critical Communications**
- **Internal (Employees)**
  - **Services**
  - **Benefits**
  - **Instructional Communications**
  - **Critical Communications**
- **Intergovernmental (Federal/State/Local)**
  - **Agency-to-Agency Communications and Policy Coordination**
  - **Federal-to-State grants Communications and Policy Coordination**
  - **Federal-to-Local Communications**

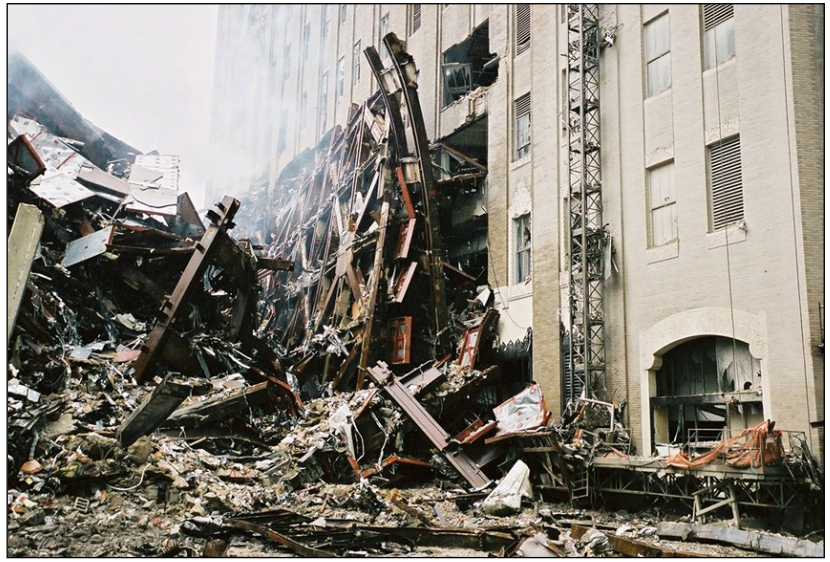
Verizon's Experience in Business Continuity

On September 11, 2001, Verizon lost the 140 West Street building that included a major switching center for the area


World Trade Center site
The rubble of collapsed buildings is piled up to 150 feet in some places. Other portions of the buildings caved into giant craters. Working in quadrants, specialized teams assess the rubble before removing it, shoring up debris where it is unstable to prevent further collapses.
Destroyed or demolished
Heavily damaged
Without power
Financial district
City Hall
Woolworth Building
Hilton Millennium Hotel
Brooklyn Bridge
Verizon building
Post office building
Deprived of power, recovery teams are relying on a network of generators.
Century 21 building
One Liberty Plaza
A nearby triage center is one of several established around the area.
South Street Seaport
American Express building
2 World Financial Center
Dow Jones Oppenheimer
90 West Street
American Stock Exchange
Battery Park
Staten Island Ferry terminals

Verizon's Experience in Business Continuity

Entrance to the West Street building that was heavily damaged by the collapse of the WTC. West Street housed a major Central Office and Switching Center, as well as facilities for operations and support staff.



View of damaged New York City E911 switching system. The system was replaced by a new switching system in an alternate location in Southern Manhattan.

Verizon's Experience in Business Continuity

Assessing the WTC Damage

- **Access lines out of service (voice) 200,000**
- **PBX / Centrex lines out of service 150,000**
- **Data circuits out of service ~4 Million**
- **Cell sites out of service 10**
- **Major Computer Systems 3**
- **Number of customers affected:**
  - **Business ~ 14,000**
  - **Residential ~ 20,000**

Landline and wireless network call completions were at least 2 times higher than normal levels on Sept. 11.

Verizon Expertise in Business Recovery & Continuity

Verizon's Response to our Customers

- **Network Capacity Added:**
  - **18 New SONET Rings Built**
  - **21 Temporary Cellular Towers Erected**
- **Computer systems recovered within 24 hrs at alternate sites**
- **3,000 technicians and managers deployed in southern Manhattan.**
- **4,000,000 voice and data circuits constructed, repaired, or rerouted within first week**
- **Aggressive deployment of Centrex, ISDN, DSL, video and audio conferencing**

Verizon recovered and rerouted the Securities Industry Data Network to allow the NYSE to open on 9/17.

Lessons Learned - Network

SONET Worked

Diversity Worked

- Entrances, Routes, Risers

Vendor Relationships

- Strong Partnerships Pay Off

Remote Access Critical

- Assume Non-Local Operations
- Dial-In, Vmail, Email, I-M

Back Up/Standby Service

- Dedicated or Shared Service?
- Will it be Available?

Practice Contingency Plans

Lessons Learned - Data Center

Watch Out for Water!

Back Up Systems are Mandatory

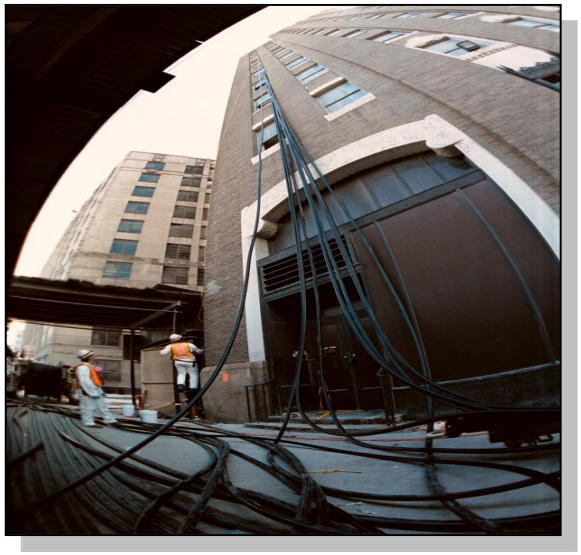
- Power & Fuel
- Back Up Services (Voice/Data/ISP/Cell)
- Back Up Data (Directories, Documentation, PC's)
- Back Up Documentation available in multiple places

Document Procedures

- Up to Date (with process to keep current)
- Conflicts can be eliminated

Prepare for Employee Downtime

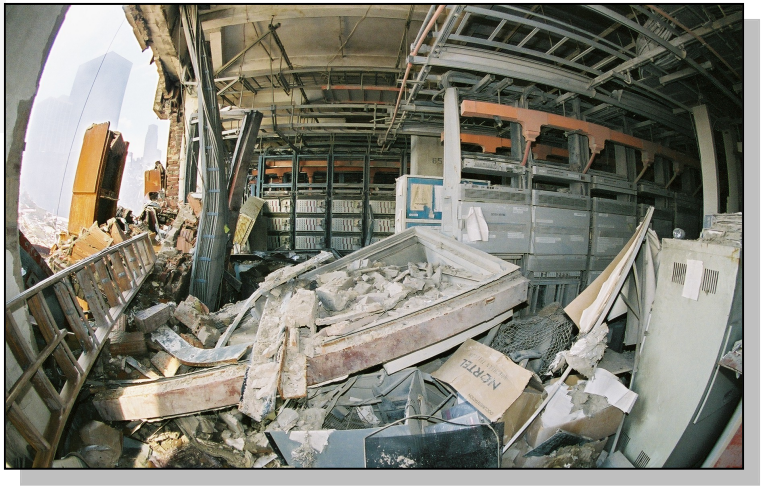
- People will need to contact Family
- Plan for Family needs at your location



Lessons Learned - Customer Comments and Directions

Top Six Focus Points of Verizon's Customers Today

- **Assess Requirements, Plan and Document**
- **Infrastructure Diversification and Hardening**
- **Remote Access Strategies need Defined**
- **Security Updated (Firewalls, Log Reviews, ID's**
- **Capacity Planning Strategy needs Updated**
- **Contingency "War Games"**



Business Continuity Scope

Many layers to Business Continuity, not just the "Building Catastrophe" scenario !

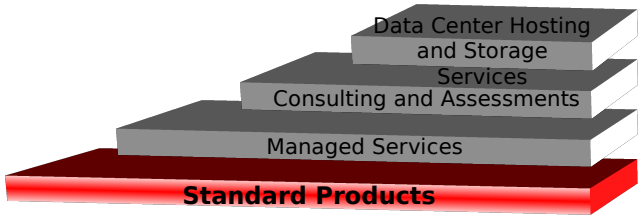
• **Security**	**-> Web Attacks, Virus**
• **Operational**	**-> Staff and Process Issues**
• **Capacity Requirements**	**-> Unexpected Need**
• **Application/System Failure**	**-> System/Data Recovery**
• **Facilities loss**	**-> Complete recovery**

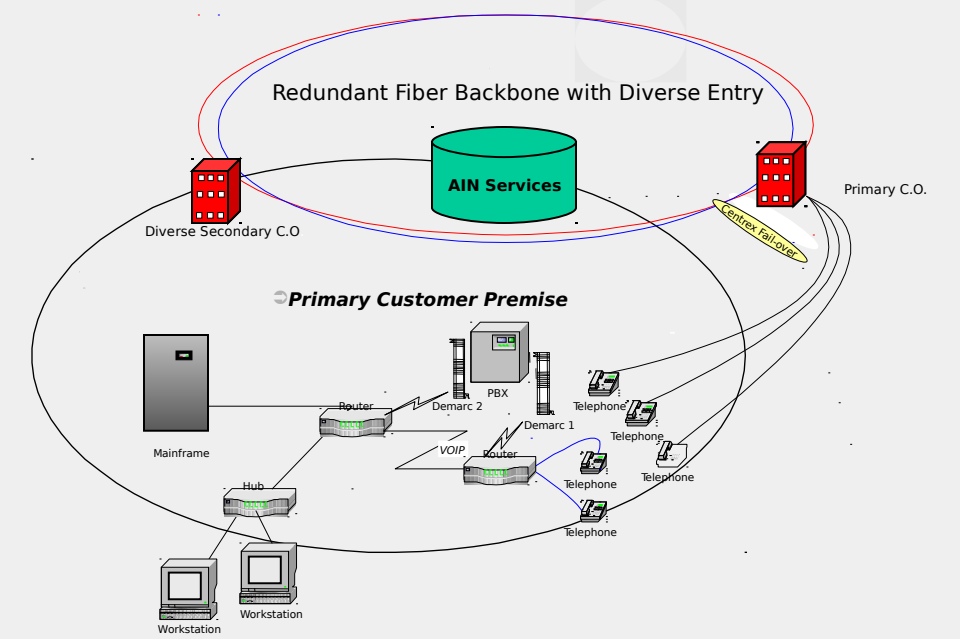
By planning for the day to day issues in a Business Continuity focus, your overall effort to plan for the "Building Catastrophe" is minimized!

Verizon Standard Products for BRCS

Network Diversity and Recoverability

- Optical Technology (SONET, DWDM, Frame Relay, ATM)
- Alternate/Dual Wire Centers and Central Offices
- Dual Routing
- Transparent Lan (TLS)
- Gigabit Ethernet
- VoIP / IPT as backup

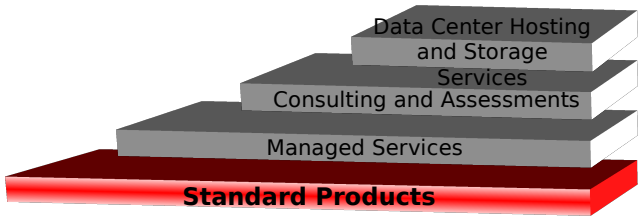




Verizon Standard Products for BRCS

Personnel Communications

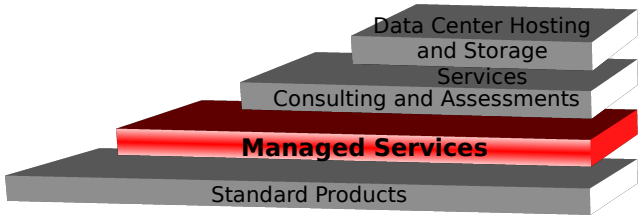
- **Video and Audio conferencing**
  - **Decreases travel costs**
- **Call Forwarding**
  - **Reroute your calls to an alternate phone number**
- **Standby Centrex**
  - **Provides backup services without the need to manage the equipment**
- **Remote Access Services**
  - **Critical for travel interruptions during crisis**
  - **Meets the demands of today's more flexible workforce**
- **Virtual Office**
  - **Capabilities of the corporate office are replicated in the home office**
- **Access Security Solutions**
  - **Access security is no longer "optional"**



Verizon Managed Services

Network Services

- **Custom Network Design and Diversity**
  - **Virtual Private Network (VPN). Secure, business- quality wide-area communications service**
  - **Managed Network Solutions. Outsource the operational management of your network**
  - **Site Patrol™. Network and Intranet Security**
  - **Design Services. Adapt your network design on an on-going basis**
- **Custom Redirect and Portability**
  - **Planned redirection of incoming calls for blocks of phone numbers to alternate sites**
  - **Built into the Verizon Network, not just your local CO**
  - **Local, long distance, and international adaptability**

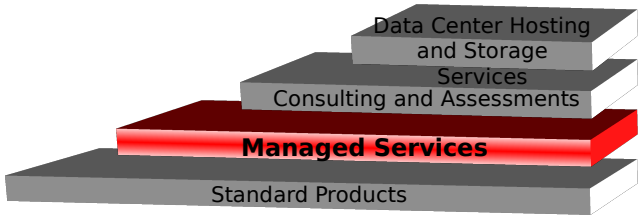


Verizon Managed Services

Virtual Office

- **Managed Video and Audio Conferencing**
  - **Customer-controlled, secure, turn-key solution**
  - **Reservation-less Conference Connections enable voice conferencing from any phone, any time, any place**

- **Remote Access Solutions**
  - **Central point of coordination for all aspects of a remote access program**
  - **Eliminates program management**
  - **Control and predictability over access-related costs**
  - **Flexibility & scalability – as much as you need but not more than you want**
  - **Ability to disperse your company's human resources**



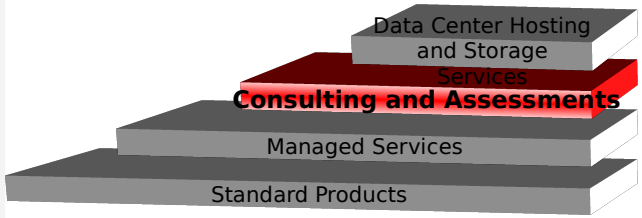
Verizon BRCS Professional Services

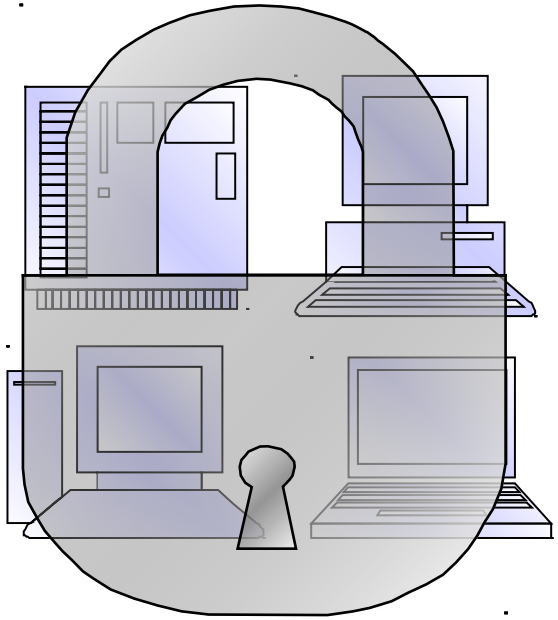
Professional Services

- **Vulnerability Assessments**
  - **Business Recovery and Continuity Gap Analysis**
  - **Network Survivability Assessment**
  - **Security**
    - **Complex vulnerability assessments**
    - **Cyber attack response**
- **Contingency Planning**
  - **Business Impact Analysis**
  - **Recoverability Assessment and Health check**
  - **Continuity Strategy**
  - **Data Center Recovery Plan Development**
  - **Corporate and Departmental Continuity Plan Development**

Alliances with IBM, EMC and Accenture

- **Leverage Resources of all Companies**





Verizon Data Center Hosting and Storage Services

Remote Data Center Services

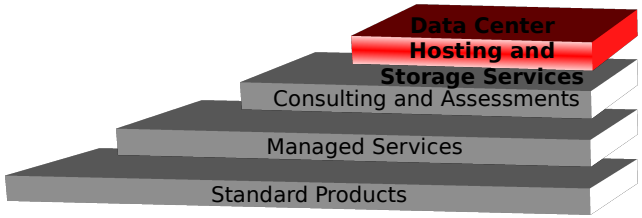
- **Hotsite Services**
- **Backup & Recovery Services**

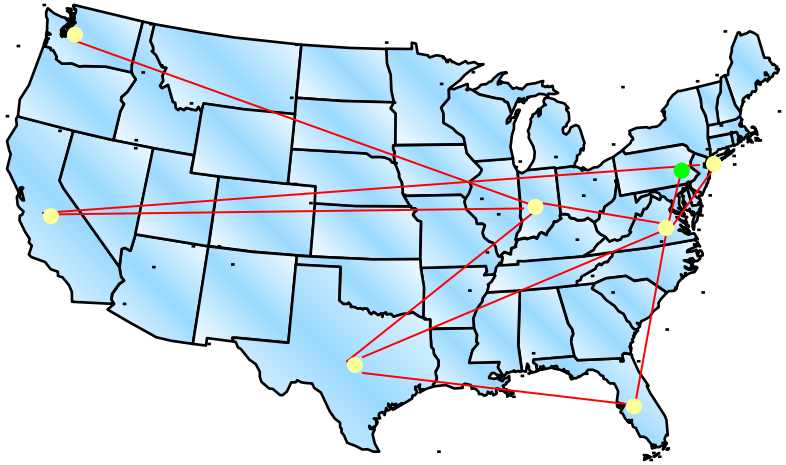
Storage Services

- **Backup / Archival Solutions**
- **Remote Storage**
- **Storage Area Networks**

Hosting Services

- **Application Hosting**
- **eBusiness, ERP, Application Continuity Services**
- **Total I/S Management Services**





Verizon's Commitment to Business Continuity

Verizon Network Engineering and IS Operations have a legacy of providing extremely high availability.

Depth and Breadth of Services

- **6300 Central Offices and Raised Floor space**
- **1.5M square miles of service area**
- **50 Mainframes, 5000+ Unix systems and 100K PC's**
- **Mission Critical Recovery times of 24 hours or less**
- **ISO 9001:2000 Certifications for IS Operations and Business Continuity**
- **Presence in 41 international locations with operations in 21**

"Our reputation for service and reliability is part of our heritage and integral to our customer commitment"

BRCS Summary

Think Business Continuity…

Verizon's Business Recovery and Continuity Services (BRCS):

- **Standard and Customized Solutions for Communications and Network Infrastructures Critical to Continuity of Operations**
- **Professional Assessment and Consultative Services**
- **Remote Data Center and Storage Services**
- **Global Network**
- **Verizon's Strength and Stability**

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Verizon Contingency Planning for COOP

"Ensuring Mission Critical Operations in an Unpredictable World…"

The Plans Compared

Plan	Purpose	Scope
Business Continuity Plan	Provides procedures for sustaining essential business operations while recovering from a significant disruption.	Addresses business processes; IT addressed based only on its support for business process
Business Recovery (or Resumption) Plan	Provides procedures for recovering business operations immediately following a disaster.	Addresses business processes; not IT-focused; IT addressed based only on its support for business process
Continuity of Operations Plan (COOP)	Provides procedures and capabilities to sustain an organization's essential strategic functions at an alternate site for up to 30 days.	Addresses the subset of an organization's missions that are deemed most critical; usually written at headquarters level; not IT-focused.
Continuity of Support Plan/IT Contingency Plan	Provides procedures and capabilities for recovering a major application of general support system.	Same as IT contingency plan; addresses IT system disruptions; not business process focused.
Crisis Communications Plan	Provides procedures for disseminating status reports to personnel and the public	Addresses communications with personnel and the public; not IT focused.
Cyber Incident Response Plan	Provides strategies to detect, respond to, and limit consequences of malicious cyber incident.	Focuses on information security responses to incidents affecting systems and/or networks.
Disaster Recovery Plan	Provides detailed procedures to facilitate recover of capabilities at an alternate site.	Often IT-focused; limited to major disruptions with long-term effects.

SOURCE: NIST Special Publication 800-34, *Contingency Planning Guide for Information Technology Systems*, June 2002